Bridge Team
Minutes of Meeting
Thursday, May 10, 2007

Meeting Attendees

Bill Rosser, PE	Dave Henderson, PE	Steve Kite, PE
Debbie Barbour, PE	Njoroge Wainaina, PE	Jeff Vones, PE
Lacy Love, PE	Victor Barbour, PE	John Sullivan, PE
Art McMillan, PE	Neil Lassiter, PE	Tom Drda, PE
Greg Perfetti, PE	Cecil Jones, PE	Donna Dancausse
John Emerson, PE	Bill Goodwin, PE	David Greene, PE
Jay Bennett, PE	Al Avant, PE	Mike Robinson, PE

1. Welcome and Review of the Meeting Agenda

   Mr. Perfetti welcomed the team and self-introductions were given. Steve Kite attended for Stuart Bourne and Mike Robinson represented the Construction Unit for Ellis Powell and Ron Hancock. During introductions Donna Dancausse was recognized as facilitator and Jeff Vones was recognized as secretary.

2. Leadership's Views and Expectations of this Group

   Mr. Rosser began by commenting on the Department's positive relationship with FHWA. He stated that the Bridge Team's focus is the bridge program from start to finish, and encouraged all members to bring forth their expertise and ideas. He distributed a draft charter for the team's consideration, and encouraged modification as deemed appropriate. He challenged the group with the following questions:

   - How do we get the most for our money?
   - Where do we invest our money?
   - How do we continue to improve?
   - Look at the overall project life cycle
   - How do we collaborate to make the bridge program better?

   Mr. Sullivan presented a performance management flowchart that began with Goals and Policies and ended with Performance Monitoring. He noted that the Department did well with each of the elements of the chart, but that coordination between the elements was lacking. He encouraged the Team to give thought to an overarching goal for the bridge program that could be clearly defined and easily communicated to the public. Furthermore, it should be understood how individual unit efforts contribute to the overall goal. A copy of Mr. Sullivan's presentation is attached herewith.

   Ms. Barbour began by noting that this was the first time all bridge program stakeholders were together in the same room. She noted that each attendee was an expert in their area, but may not be in other areas. She encouraged sharing of expertise across disciplines in working toward a common goal for the bridge program.

3. FHWA's Observations of NCDOT's Bridge Program

   Mr. Drda presented comparisons of where North Carolina stands relative to other states with respect to size and condition of our system. He discussed the striking difference between square foot construction costs of the replacement structure compared to the original. He quoted replacement costs averaging $550 per square foot of original deck area. He emphasized the need to develop a bridge management system and the benefit of that system when seeking federal funding for projects. A copy of Mr. Drda's presentation is attached herewith.

4. Operations Performance Measures

   Mr. Emerson presented some recently developed bridge performance level of service measures that employ a tiered approach. Performance targets have been established for bridges (i.e., deficient bridges, deck, superstructure, etc.) on a statewide, regional, and subregional basis. The NBI evaluation was then used to determine performance by division.

5. Discuss the Team's Purpose and Direction

   As a result of the team's discussion the following possible initiatives were identified:

   I-1 <u>Include bridge criteria in the 3-R Guide</u>
   Currently all bridges are designed to the same standard resulting in some bridges having design characteristics that appear excessive. Design for appropriate use and site specific criteria such as operating speed versus statutory speed, hydraulically in-kind, etc. Include tier concept. Identify where to increase or lower standard.

   I-2 <u>Reexamine current TIP</u>
   Several years have passed since the bridge projects were programmed. Are current priorities properly reflected? The selection criteria used for programming did not include current budget constraints, environmental issues, etc. May need to look at selection process including the amount of division involvement.

   I-3 <u>Develop overarching goal for the program</u>
   Is the goal "To have X percent of the bridges with a sufficiency rating greater than 80 by 20XX" appropriate? If so, define the specific percentage and date. Further break down by tier (statewide, regional, sub-regional) may be beneficial. Reflect an adaptive management approach.

   I-4 <u>Update the bridge preservation program</u>
   Investigate appropriate preservation activities and funding level to extend the useful life. Balance the funding levels between replacement/rehabilitation/preservation and investigate alternate funding sources. Requires a systematic approach applied to a corridor.

I-5 Investigate alternate financing sources
Since bridge replacement funds are the most restrictive, investigate using other sources such as STP, NHS, interstate maintenance funds to provide flexibility for the project.

I-6 Increase awareness of bridge program needs
Develop an educational package/briefing for the purpose of emphasizing needs and soliciting resources.

I-7 Determine process for distributing funds
Optimize the funding of bridge preservation, rehabilitation, and replacement.

I-8 Develop index reference to illustrate needs vs. availability to meet needs by division
The condition of assets varies across the divisions, as does their ability to maintain, rehabilitate or replace. John Emerson is currently working on graphical representation of bridge condition by division.

I-9 Maintaining traffic during construction
Review the decision-making process. Investigate utilizing more road closures. Utilize incentive/disincentive contract clauses. Explore alternative ways to accommodate EMS or school districts. Eliminate or minimize use of on-site detours. Control the cost of off-site detour improvements. Consider/Communicate the cost impacts of each solution to the public/decision makers.

I-10 LRFD implementation mandate
In recognition that the code change will increase the cost of new structures: Where would design exceptions make sense? Employ tiered approach? Increased costs during geotechnical resistance factor calibration phase.

I-11 Look for economies in design process
Are resources and methods effectively shared among units?

I-12 Investigate rapid construction techniques and innovative materials
Understand how long construction takes and why it takes the time it does. Assess the cost of expediting a project.

I-13 Strategic letting of projects
Look at ways to group or schedule project letting. Moratorium constraints necessitate sporadic letting of projects and escalate costs. Level off the work cycle to encourage more contractors to bid in the state.

I-14 Contingency projects
In light of recent rescissions, investigate having shelf plans available for advance to let if budget allows.

I-15 Guidance on structure type selection
During environmental document development preparation guidance is needed related to appropriate structure types. Consideration should be given to life cycle costs for structural components.

I-16 Information sharing
Look at how information and feedback is shared among design units and divisions.

I-17 Efficient environmental stewardship
Identify a balance between accommodating environmental resources and efficient project delivery. Which mitigation efforts are really effective? Are there effective alternatives (to buffers, moratoriums, ten foot top of bank, water quality, e.g.) that can be presented to stakeholders. Should tiered approach be considered?

I-18 Update process of estimating bridge project cost
Explore transitioning to an existing square foot method. This would reflect the increase in bridge lengths and widths that are inherent in the design process.

6. Determine General Operating Procedures

- Meeting frequency: Quarterly
- Meeting length: Two hours
- Substitutes: Substitutes are allowed however they must be prepared in advance, given authority to act on your behalf and the chairs must be notified prior.
- Making Decisions: Strive to achieve consensus and seek guidance from the Highway Leadership Team in the case of impasse.
- Minutes: Jeff Vones will take
- The team will likely assemble task teams (involving people not on the Bridge Team) to address action items/initiatives.

7. Other

During the discussion a need was identified for definitions for key terms. Mr. Drda provided the attached document with these definitions.

8. Proposed agenda for June 20th 2:00 p.m. of Bridge Team meeting

- Action plan on team priorities
- Look at data on current performance (sufficiency/deficiency) and discuss performance target for goal
- Discuss definitions for activities